Knitted Outerwear Times

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sweaters • swim suits • infantswear • knit fabrics • polo shirts • gloves • headwear

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Swimwear Firms Join NKOA Show

Thirty-one firms will back the drive to extend the swim suit season with a display of swimwear at the live-model show of the swimwear division of the National Knitted Outerwear Association January 9 at the Statler-Hilton.

The presentation will be at the annual convention of the National Retail Merchants Association as part of an afternoon seminar, "Problems of Merchandising Swim Wear." Leonard Bummolo, sportswear buyer of B. Gertz, Jamaica, an Allied Stores affiliate, will lead the seminar. An estimated 600 store executives and resident buyers will see the show.

The presentation will include a skit set in a mythical American town, Pokomoka, where two retail stores compete. One is in decline because of its early close out on swim suits. The other, a "wide awake store," is reaping profits because it prolongs the swim suit season.

Edward A. Brandwein, administrative secretary, NKOA, is directing the show. The clothes will be coordinated by Mildred McClelland, McClelland Model Agency. Martha Errol, musical comedy star, will be the commentator. The cast is headed by Sandra Brewer, 1960 Swim Suit Fashion Queen, and Broadway performers Peggy Peeters, Chuck Tomlinson and Don Murphy.

New York City firms displaying swimwear will be Maidenform, Inc.; Jordan Mfg. Corp.; Flexees International, Inc.; Marlyle Sportswear Corp.; Curtis, Eddy-Form Co.; Monterey

(*Continued on Page* 26)

Joseph Specker, left, of Robert Bruce, Inc., newly elected president of Knitted Outerwear Manufacturers Association, Pennsylvania District, receives gavel of office from retiring president David Rosenblatt, Forrest Knitting Mills, at annual dinner meeting.

Insurance Program Is Open Till Jan. 15

The closing date for new applications to the National Knitted Outerwear Association Executive Group Life Insurance Program has been moved up to January 15, it was announced by Sidney S. Korzenik, NKOA executive director and counsel.

The new closing date was announced after a number of NKOA members asked for more time to file their applications. After the closing, the plan will not be opened again this year.

The program has been in operation for over three years. Currently, more than 650 executives of member firms belong.

While the plan is open, executives may join without medical examination.

The cost of the plan is low and the premiums are tax-deductible.

District Associations

Trade Outlook For '61 Good, Korzenik Tells PEKOMA At Annual Dinner

By ALLEN SOMMERS

PHILADELPHIA, Pa. — The outlook for the industry for the new year is favorable, but what the industry needs is to organize its style diversity around a few dominant style trends, Sidney S. Korzenik, executive director and counsel for the National Knitted Outerwear Association, told members of the Pennsylvania District at their December 19 annual dinner meeting held at Old Bookbinders Restaurant, here.

Design diversity is warranted if it proves an aid to volume, he said, but it can also prove a source of confusion to the buyer who is confronted with too many varieties, and an aggravation of risk to the manufacturer who has to produce them. Successful seasons have been those in which buyers were able to find guidance in a uniform theme promoted by leading producers, there being opportunity for variety within such a general mode. To discover or create a few dominant styling themes is regarded as esential to effective merchandising and production planning, he declared.

Four years of harmony in which PEKOMA made new strides in membership, educational programs developed, research and training and testing programs sponsored at Philadelphia Textile Institute and Dobbins Vocational School, and harmonious labor-management relations, were reviewed by retiring president David Rosenblatt, Forrest Knitting Mills, who presided. Mr. Rosenblatt has served four consecutive terms.

Joseph Specker, Robert Bruce, Inc., was elected to succeed him as president for the coming year.

Several scholarships and the association's unrestricted grant to PTI were presented at the meeting. Max E. Falik, Charles Peberdy & Son, presented a check for $250 for the annual Martin Feld Memorial Scholarship to Dr. Bertrand Hayward, president of the Philadelphia Textile Institute. Harold Neuman, Robert Bruce, Inc., presented Dr. Hayward with a $2,000 check on behalf of PEKOMA.

The first scholarship from a fund created last year to honor John Sichel, executive of Dearnley Bros., knitting yarn firm, was awarded at the meeting to John Spraga, a student at PTI.

Present at the meeting to hear a moving tribute to the late beloved H. H. Cohen, general counsel of PEKOMA since it was organized in 1919, were his widow, Mrs. Clara Cohen, and two sons. Ingram Bergman, Bergman Knitting Mills, delivered the tribute and presented an illuminated and framed "In Memoriam" to Mrs. Cohen.

Dr. Edward B. Shils, executive secretary of PEKOMA, told the membership, "We are going into a new era and in the face of the current situation when we are buffeted by the general economy and by competition, the greatest thing of all is that we have each other." He cited the

(*Continued on Page* 18)

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Double Jersey Knitting

Converting Standard Interlock Machines

By CHARLES REICHMAN, Editor

CAN conventional interlock yardgoods and sweater-strip machines be converted to turn out the variety of rib stitch fabrics loosely classified under the generic name of double jersey? Although it is possible to modify virtually any type of circular knitting machine to produce fabric structures or stitches not conceived in its original design, there are distinct limitations to any such machine changeover. This appears to be especially true of standard interlock equipment; despite the fact that it is a basic rib knitting unit, an interlock unit has definite stitch drawbacks arising from these two fundamental characteristics of the machine:

- The alternate long and short needle placement in the cylinder and dial.
- The unique gating or relationship of these alternate needles to each other; the fact, in other words, that the needles in the cylinder and dial are positioned one above each other and not between each other as in a conventional rib machine.

But these two limitations need not be obstacles to the conversion of a plain interlock machine to manufacture double jersey fabric if certain other conditions can be met. Among these are the following:

- Are the slots in both cylinder and dial completely cut through and thus capable of accommodating either long or short needles?
- Can the dial be racked or displaced to permit rib instead of interlock gating of the needles?
- Are the cam sections in the cylinder and dial interchangeable to permit their sequential rearrangement?
- Does the machine have a swing cam or can the cam raceway be modified to permit tucking and/or welting?

Not all interlock machines are, of course, readily subject to the changes outlined above. Most interlock machines, for example, do not have fully cut needle slots in the cylinder and dial. Many models have standard cut slots in the cylinder but not in the dial; some, however, particularly foreign-built interlock units, have fully cut needle slots in both needle housings.

Interchangeability of cam sections is also rare but on machines which boast this feature the pattern scope of the machine for double jersey knitting can be fairly extensive.

The fact that some machines do not come equipped with swing cams to permit tucking and welting can, of course, be a serious obstacle in converting the unit to double jersey knitting, but the absence of a swing cam on some machine models can be overcome by changing cams or affecting simple alterations in the cam structure such as filing down a section so that needles will welt rather than knit at the required point in the knitting cycle.

Where, however, one or more of the modifications cited above can be made, then the versatility of the plain interlock machine in terms of knitting double jersey structures is surprisingly broadened.

If the slots in the cylinder and dial of the interlock machine are fully cut through so that long and short needles can be arranged in any set-out desired and the cam sections can be realigned in either dial or cylinder, the production of such a standard double jersey fabric as eightlock or 2x2 interlock becomes a relatively easy matter. This structure is produced when the needle set-out in the dial is alternately two long and two short and the reverse in the cylinder, or alternately two short and two long. Although in many respects similar to plain or 1x1 interlock, eightlock is a heavier and more balanced and dimensionally stable type of fabric.

Variety in knitting eightlock can be achieved by arranging the long and short needles in the cylinder in sequential groups to permit, with the creeling of different colored yarns, the knitting of vertical stripes. A typical arrangement in this fashion would require six continuous long needles alternating with six continuous short needles in the cylinder; in the dial there would be no change in the conventional interlock needle arrangement of one long and a short needle in alternate slots. Knitting would proceed as shown in Figure 1 below.

Checked effects in two- or three-color combinations can be produced in virtually the same way by feeding different colored yarns at predetermined feeds.

On interlock machines which have fully cut needle slots only in the cylinder and short and long cut needle slots in the dial, it is obviously impossible to turn out 2x2 interlock fabric such as just described. However, a variation of 2x2 interlock, called mock eightlock, can be knitted by modifying the needle set-out in the dial in the following manner and leaving the alternate long and short needle arrangement in the cylinder undisturbed.

1. Remove all short needles from the dial.
2. Next remove all alternate long dial needles.
3. Fill the open long needle slots in the dial with short needles.

(*Continued on Page 5*)

FIGURE 1

Feed No.	Cylinder	Dial
1	Knit groups of six short needles	Knit short needles only
2	Knit groups of six long needles	Knit short needles only
3	Knit groups of six short needles	Knit long needles only
4	Knit groups of six long needles	Knit long needles only

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4. Displace the dial to provide for rib instead of interlock gating of the needles.

The mock eightlock fabric produced in this way is indistinguishable from true eightlock cloth on the face side. The reverse side of the fabric, however, will have a pronounced rib effect. As compared to regular eightlock fabric, the imitation will be somewhat lighter in weight.

The manufacture of the more classic types of double jersey fabrics such as single and double pique is more difficult to accomplish on conventional interlock machines. To produce these structures on most interlock sweater-strip machines presently in place in mills, new camming is required.

Consider the knitting of single pique cloth: This fabric structure is produced by tucking on the dial or cylinder at every third feed. This means that some provision must be made for tucking at pre-determined needles in either the cylinder or dial. On one type of conventional interlock machine this is done by installing new cams at every third feed to actuate the dial needles only to the tucking position.

On another machine this is done by substituting a cam raceway for welting instead of tucking the needles at every third feed. This cam arrangement will produce a single pique type of fabric which has somewhat the same appearance as the tuck single pique cloth but is lighter in weight and possesses less body or bulk. This latter preperty may be improved slightly by knitting a tighter structure; however, it would still be inferior in this respect to single pique cloth knitted on the tuck principle.

The problem of knitting double pique cloth — either French or Swiss base—on conventional interlock machines requires more extensive cam modification than for the knitting of single pique fabric. The recamming here must provide for welting of alternate needles in the cylinder so that, for French double pique cloth, the long dial needles would knit at the first two feeds, the short dial needles at the next two while the cylinder needles would alternately welt and knit at these feeds. In knitting Swiss double pique cloth, the dial needle action is the same as in French pique but the cylinder needle action is the reverse; that is, the cylinder needles alternately knit and welt while the long dial needles knit at the first two feeds and the short dial needles at the next two feeds.

Feed No.	Dial	Cylinder
1	Short needles knit	All needles welt
2	Long needles knit	All needles knit
3	Long needles knit	All needles welt
4	Short needles knit	All needles knit

This is to be contrasted with another techniques used on still another interlock machine. The method, shown below, will be seen to be closely akin to the principle of knitting French double pique cloth:

Feed No.	Dial	Cylinder
1	Short needles knit	All needles knit
2	Long needles knit	All needles welt
3	Long needles knit	All needles knit
4	Short needles knit	All needles welt

A variation of double pique producible on certain interlock units is called crossover pique. This fabric is produced by tucking needles on both the dial and cylinder. At Feeds 1, 7, 10, etc. dial needles tuck while all cylinder needles knit. Then the cylinder needles tuck at these feeds while all dial needles knit.

The range of double jersey structures producible on conventional interlock machines is, of course, greater than has been indicated in this brief discussion. Actually, the design limitations for double jersey knitting on interlock machines varies with each machine model and the degree to which a knitter is willing to invest in a recamming job. The changeover in camming is not really as laborious or expensive as some manufacturers believe. One knitter quite handy with tools converted a standard fine gauge multi-feed interlock machine from regular sweater-strip knitting to double pique yardgoods knitting in less than four hours. In most cases such conversion will have to be done by the knitters themselves, since the knitting equipment manufacturers appear to be reluctant to undertake this work. This is, of course, quite understandable; in the profit for the machinery builder rests in the sale of new machines and not in converting old machines to operate in a fashion not within their original scope. Reconversion, however, may be the answer to the problem facing many knitters of overcoming slow deliveries of foreign and domestic double jersey machines due to heavy order backlogs.

One one type of foreign interlock machine equipped with alternate long and short needles in the dial and one type of needle only in the cylinder, the double pique structure may be produced in this way:

Double Jersey Knitting

New Spiral Drum Used On Model JSD-24

NORRISTOWN, Pa. — A new spiral jacquard automat drum to incorporate the 24 jacquard knitting feeds in a 30 inch diameter machine size has been developed by Wildman Jacquard Company for its JSD124 double jersey yardgoods machine.

Previously all the jacquard pattern automat drums moved with an intermittant motion, indexing once for each section and moving one whole pattern lever section with a maximum of 56 pattern levers, forward ready for operation, at one time. The number of feeds was then confined to the space required between feeds to select and index forward all 56 automat levers after the jacquard lever raising cam had passed over the last jacquard automat lever on that automat drum and before the next jacquard lever raising cam began to work on the first lever of that automat drum.

The new spiral jacquard automat drum arrangement permits the automat drum to revolve continuously while the jacquard automat levers are being selected, indexed forward and returned for re-selection. With this new spiral drum arrangement the required circumferential distance between feeds necessary to complete the jacquard automat lever selection sequence is halved allowing room for 12 additional feeds or a 100 per cent gain in production over the standard 12 feed jacquard machine.

When all the jacquard automat levers are in operation they form a constant moving wave pattern. It will also be noted that the jacquard spiral drum automat moves the pattern levers forward at a constant rate which places each selected lever in front of the jacquard lever raising cam one at a time as the automat revolves, thus producing a smoother more positive lever selection action particularly on finer cut machines. With the elimination of the geneva motion and the drum indexing pins, formerly required to obtain the intermittant motion, the automat drum can now be driven simply by the engagement o fa gear chain consisting of four spur gears, arranged so that the timing and readjustment of the individual automat drums is greatly simplified.

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Knitting Principles

Fundamentals Of Warp Knit Engineering—Part 7

By A. REISFELD
Director, Research and Development
Gehring Textiles, Inc.

IN the previous article, attention was centered on shape of cross-section and surface characteristics and the influence of yarn color achieved via the various dyeing routes. In the present discussion, the focus will be the impact of twist and the numerous factors involved in its determination.

TWIST — This yarn variable is of considerable importance in warp knitting because of its influence on warping and knitting efficiency, fabric hand, appearance and physical performance. Twist may be defined as the measure of turns given to the yarn strand in the plane of its cross-section. One turn of twist is inserted when any point on the cross-section described one full revolution. Twist is always expressed in turns per inch or tpi in abbreviation.

In warp knitting the twist of continous filament yarn ranges between 0-7 tpi. In specialty applications like crepe it may reach a value of 40-70 tpi. The effect of twist on the yarn manifests itself in geometrical, tensile, visual, tactile and dynamical modifications. The most significant of these modifications are:

1 *Configuration of filament strand*—The action of twist alters the disposition of yarn filaments by bending them into a helical shape.[40] In an unthrown material the filaments are oriented parallel to each other in a flat or ribbon-like form. The concept of filament helix or spiral is portrayed in Figure 1. The filaments in the yarn strand are twisted into a spiral (A) making an angle α with the vertical X. The greater the amount of tpi the larger the angle α of the spiral. Connection between the twist and angle α is given by the equation:

$$\tan \alpha = \frac{\text{tpi}}{\sqrt{\text{count}}} \times k.$$

k is a constant.

As the filaments are twisted into a spiral, they redistribute themselves gradually from a flat into a cylindrical form as the tpi increases. The filaments on the outside of the yarn strand have a larger angle of spiral than those on the inside. In warp knitting the majority of yarns are used in twistless or near twistless condition as delivered on the spinning package. Even 3-7 tpi to which the yarn is thrown for certain end-uses does not impart a cylindrical shape to the filament strand. It appears rather like a fluted drill than a true cylinder.

The 3-7 tpi. although by no means regarded as "hard twist" has a profound influence on the behavior of yarn from the standpoint of warping and knitting efficiency. It transforms a loose bundle of filament, as existing in twistless yarn, into a relatively tight and coherent strand. The main objection to twistless yarn is because of the filaments having a tendency to balloon out, catch on any object they come in contact with and break. Ballooning is particularly prononunced in low regain synthetics such as nylon or Dacron where the friction between the yarn and creel guides generates static electricity[41] charges which open up the filament bundle (see Figure 2). Cellulosic yarns present a lesser problem of ballooning thanks to their higher regain which prevents building up of excessive static charges.[42] By imparting a few tpi to the yarn, the danger of filament ballooning is effectively removed, thereby minimizing warping and knitting problems.

Improvement in quality of unthrown yarn and in its package coupled with better understanding of the ballooning phenomenon enabled the warp knit industry to obviate the necessity of throwing and the expense it entailed. This was accomplished by mounting on the creel special low friction guides made of conductive ceramics and high voltage discharge bars to neutralize the remaining static charges.[43] Failure to eliminate the charges will cause ballooning of filaments on the warp knit machine once the yarn is unwound from the beams. Low friction tension bars and short, direct path of warp sheet on the machine reduces the danger of disturbing the filament strand until the yarn reaches the guide bar level.

Generation of static electricity is not the only factor contributing to disturbance and ballooning of filaments. The action of unwinding the yarn from cheese or pirn, passage through tension devices, flutter of tension bars on the machine, etc., all tend to open up the filament bundle. Warping and knitting of unthrown synthetics calls for considerable skill in keeping the yarn disturbance at minimum. On multi-bar Raschel machines where the guide bar assembly swings over a large arc, thrown yarn must still be used due to severe filament ballooning occuring at the instance of swing.

2. *Tenacity* — Twist influences yarn tenacity to a certain degree, although for the low range of tpi used in warp knitting, the effect is very slight. As the unthrown yarn is imparted twist, its tenacity increases by a small percentage until it reaches peak value. Any additional twist beyond this point only results in decrease of tenacity.[44] For example, unthrown 75 denier rayon has a tenacity of 2.20 grams per denier. At 20 tpi it reaches the maximum value of 2.25 grams per denier. From then on the tenacity decreases. At 40 tpi (crepe yarn) it is down to 2.10 grams per denier and at 80 tpi, 1.45 grams per denier. In general, the finer the yarn denier, the greater the tpi to bring tenacity to its peak level.

It would be of interest to consider at this juncture behavior of filaments in thrown yarn under conditions of load.[45] (See Figure 3). The load (k) imposed on the filament bundle may be resolved into two components. (a) Longitudinal. This is marked as (L) and runs parallel to the axii of individual filaments and stresses them in tension. (b) Vertical. This marked as (M) runs at right angles to the axii of the filaments and stresses them in shear.

The value of each component is:

$L = k \cos \alpha$—tension component.

$M = k \sin \alpha$ — shear component.

k—load on filament bundle.

α—angle of helix.

It should be remembered that the strength of textile materials in shear is much smaller than in tension. As the material is stressed more and more in shear, its strength decreases.

The moderate increase in tenacity experienced at medium tpi value is due to cohesion of individual filaments leading to an even distribution of load. With the increase in tpi and resultant greater spiral angle of the filaments, those located in the core of yarn strand will form a smaller angle than those on the surface. The filaments in the core portion featured by a

(*Continued on Page* 9)

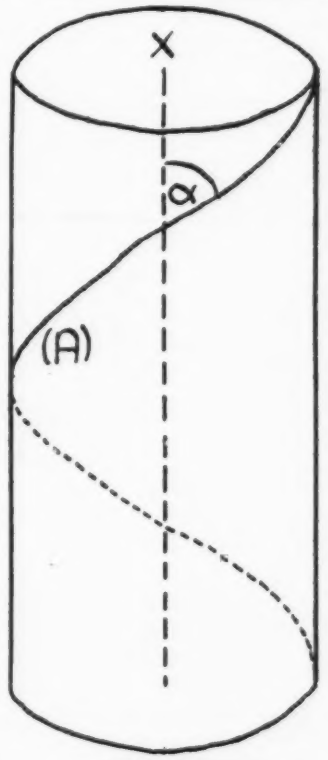

FIGURE 1

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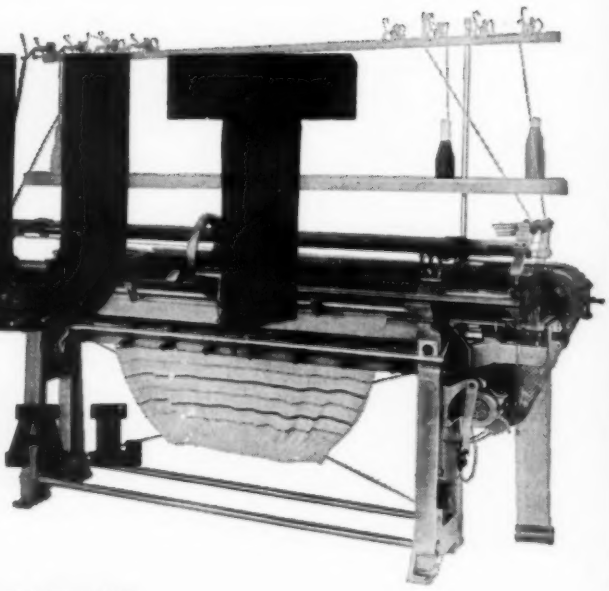

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smaller angle of spiral elongate to a lesser degree than those at the outer portion and thus carry a disproportionate share of the load. Under these circumstances the core filaments will fail before the others reached their breaking point. Once the core filaments snap, the rest break rapidly until the entire yarn fractures.[46]

3. *Elastic properties* — The presence of twist in yarn modifies to a considerable extent the outline of its stress strain curve and affects such parameters as extensibility, modulus of stretch, elongation at break, recovery, etc. This, however, is only valid for substantial amounts of tpi. Warp knitting yarns, with their limited tpi, to all practical purposes retain intact the elastic characteristics of the unthrown material. In general, the higher the tpi, the greater the elongation for given load and also the elongation at break.[47]

4. *Dynamic properties* — dynamic balance of yarn plays an important part from the standpoint of warping and knitting. An unbalanced yarn, either plied or singles, is one which, when allowed to hang freely in loop form, will twist about itself. Such yarn is certain to cause many difficulties at the warping and knitting levels due to its tendency to snarl, kink and wrap either on itself or adjacent ends.

Snarling occurs when either the component threads or filaments contain more tpi than necessary to keep them in position. In order to prevent the yarn from developing a tendency to snarl and loop, so-called twist setting procedure is resorted to during which the yarn is kept under suitable conditions of heat and moisture. Warp knitting yarns do not contain enough tpi to give rise to balance problems; however, crepe yarns[48] can and frequently do produce serious troubles unless correctly twist set.

5. *Denier and diameter* — The filaments, in the course of twisting, assume a helical configuration and, therefore, gradually contract in length. The greater the tpi and hence the angle of helix, the greater the value of yarn shrinkage taking place. As the yarn shrinks, its denier increases in proportion

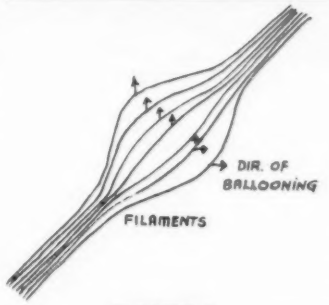

FIGURE 2

to contraction in length (denier is a relationship of weight to length). For example, 100 denier rayon thrown to 15 tpi contracts 1.75 per cent of its original length. Because of contraction, the denier increases to 101.75. Percentage contraction is not directly proportional to tpi. Thus, with the twist doubled (30 tpi) contraction increases to 5 per cent. The contraction percentage may be reduced by maintaining the yarn under heavy tension during throwing. The phenomenon of contraction looms important only in case of crepe yarns where shrinkage and denier increases must be allowed for when designing and costing the fabric. Twist also modifies the yarn diameter. As the filament strand is twisted, its diameter is progressively smaller until a limit is reached beyond which the yarn diameter will commence to increase again. The heavier the yarn the lower the tpi of the above limit. Thus, for 75 denier rayon the limit is 4 tpi and for 150 denier 25 tpi.

6. *Luster*—Twist has a dulling effect on any yarn. The greater the tpi the more intense the dulling action. Even the low tpi level used on warp knitting is sufficient to dull the metallic glint of bright yarns and help to subdue the luster of semi-dull materials.

7. *Hand*—The amount of tpi inserted into yarn is an important factor in determining the hand of fabric knit thereof. Thrown yarn produces a firm, dry and crisp hand. The greater the tpi, the more pronounced its effect on fabric hand. A classic example of what the twist can do to a yarn and fabric hand is provided by crepe. This yarn in comparison to regular material changes the fabric hand, texture and appearance out of recognition.[49]

8. *Miscellaneous*—Twist also modifies the following yarn or fabric properties:

(A) Friction (kinetic). Twist reduces the frictional drag of yarn moving across a metal or ceramic surfice.

(B) Cover. Thrown yarn due to its decreased diameter and coherence of filaments will produce a poorer fabric cover.

(C) Absorption. Presence of twist reduces absorption and dye uptake of yarn and fabric because of filament compression restricting penetration of fluids.

(D) Heat retention. Owing to compactness of thrown yarn, the fabric bulk decreases and with it the volume of air entrapped inside the loop structure. The reduced volume cuts down the heat retentive powers of the fabric properties influenced by twist. The reader, however, should by now gain some appreciation of the complexity and importance of twist.

When speaking of twist we usually quote the tpi specified on the yarn producer's package. While valid, this as far as warping is concerned does not indicate the final twist present in the yarn after being converted into a fabric. It should be realized that the yarn undergoes changes in its twist content in the course of both warping and knitting. The change may frequently be of sufficient magnitude to affect fabric appearance or knitting efficiency.

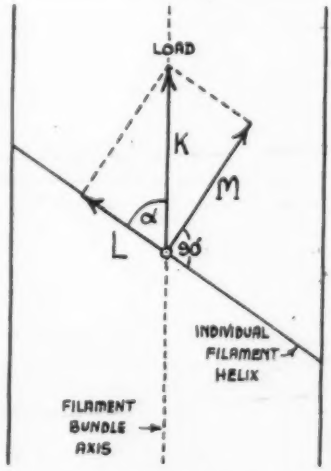

FIGURE 3

CHANGE OF TWIST IN WARPING — Each time yarn is unwound off a package (cone, tube, pirn, bobbin, cake, etc.) overend, twist is put in or taken out depending on the direction of yarn wind and its original twist. Two simple rules establish connection between both.

Overend unwinding inserts "S" direction twist into yarn if the package has been wound clockwise. Conversely, "Z" direction twist is inserted on unwinding if the package has been wound anticlockwise. Now, if an "S" twist yarn wound anticlockwise on the package is unwound, it will loose twist and conversely.

The amount of tpi gained or lost by the yarn in the process of overend unwinding is determined by the circumference of the package. Each time a length of yarn equal to its circumference is unwound, one full turn of twist is either inserted or taken out.[50]

On a low twist yarn, e.g. acetate or nylon, even small differences in tpi may be significant, since they show up in form of streaks or shade marks. If, for example, yarn cakes are used, there is a danger of creeling them upside down. Under these circumstances, some ends will receive extra twist while others may lose it depending on the direction of cake winding and mode of unwinding after creeling. The ends unwinding in opposite directions especially when subsequent knit side by side are most likely to produce a streak because of twist differential.

CHANGE OF TWIST IN KNITTING—As the yarn is wrapped around the needles and converted into loops, it is again subject to modification in its twist content. There are two principal reasons accounting for it:

(A) Movement of guides around the needles.

(B) Bending of yarn on kinking it into loops.

The guides perform a compound movement parallel to the needles (shog) and between them (swing). The yarn carried in the guides is wrapped around the needle stems in either complete or partial circle

(*Continued on Page* 24)

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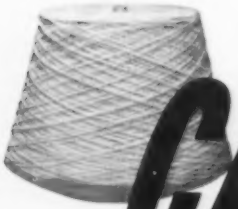

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Swimwear

German Designer Has An Artist's Inspiration For Color

GERMAN designers whose swimwear is imported by the U. S. have contributed greatly to orienting the tastes of the American woman toward style characteristics prevalent in Europe. The reason for this is evident when a designer such as Wilhelm Bleyle of Stuttgart, Germany, is cited. His suits are marked by three impressionable characteristics: There is a pronounced use of Helanca nylon textured filament yarn, singly and in combination with other fibers; exclusive hand prints in bold and bright designs looking more like an artist's canvas than a fabric design are strongly represented; and the silk look, a prominent forecast of ladies' outerwear in the forthcoming year is equally stressed in these swimwear fashions.

Basic designs are textured jacquards, stripes, checks and florals. There are also solids in a wide array of colors and many are trimmed or highlighted by stripe treatments. Abstract prints are notable for their unusual color combinations and motifs that can be interpreted in as many ways as an abstract painting. As interesting as soft prints having muted colors blending with one another, are those with objects—abstract or realistic—sharply outlined in black or another dark contrasting color.

One-piece sheaths and maillots with the Continental leg cut (slighly higher than the average American maillot) predominate although a few bikinis spice up the collection this year as in years previous. Further styling characteristics are deeply cut backs in V, U and square shapes, and partly gathered up decollate.

In addition to swim suits, Mr. Bleyle has also designed several cover-ups, many of which will ensemble more than one suit.

A banded scoop neckline which reaches around to a deeply squared off back, details his sheath which is designed in three-color horizontal stripes. The suit is knitted of all Helanca nylon processed yarn.

A highly abstract multi-color Vetrix print covers this 100 per cent Helanca nylon suit artfully cut into a very broad V-neck resulting in widely spaced straps closely resembling cap sleeves.

Constructed of Latex faille, this suit features sheath skirt and V-neck both of which are detailed by tri-color striping gracefully following the lines of the suit. The stripes that adorn the top extend to become very wide straps. A bow further emphasizes the stripe treatment.

The silk look in Wilhelm Bleyle's creations are made possible with Vetrix Super-Quality Peau de Peche, a dull-sheened material that closely simulates silk. It is employed here in a heavily outlined, multi-color floral print suit which features V-neck and Continental leg cut.

An exceedingly feminine and elegant suit is this sheath knitted of the new Vetrix material Tanissa. White tulle lace covers the entire suit emphasizing the sheath skirt and sweetheart neckline with wide and narrow scalloping at each border. A deep semi-circular cut back and gathered up sides further characterize this model.

MACBOR

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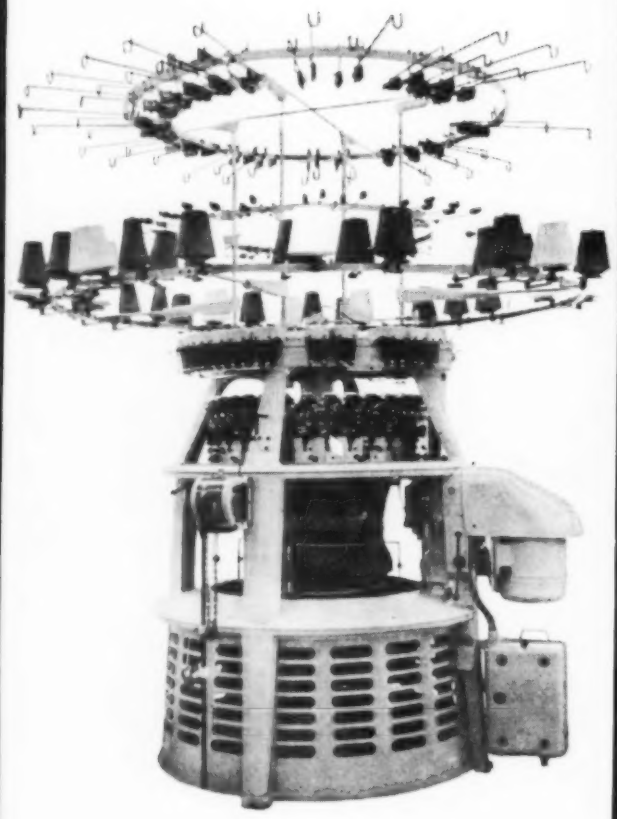

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Swimwear

Juniorite Again Makes Swim Suit

A collection for 1961 is inaugurating the reentrance of Juniorite, Inc. into the swimwear field. Designed by Juniorite and Garwin, the line is manufactured by Garwin Corp. Winky Jr., a division of the company has been adopted as a trade name for the swim suits.

In a collection ranging in price from $7.75 to $12.75 wholesale, woven cotton and elasticized suits are in sizes 5 to 15 and the knits are small, medium and large.

Cotton swim suits come in a great range of style and construction diversity. Both youthful and sophisticated suits are within this grouping; the former demonstrated by low-waisted, skirted suits — one in a puckered gingham check trimmed with thick ric-rack, and others decorated with abstract, floral and butterfly prints having such details as bows, ties and a petal bra.

More sophisticated numbers include a petal-skirted suit in which colors of beige and gold or lilac and purple alternate for the petals of the skirt. There are also gracefully draped suits such as a blue and purple floral print with asymmetrical draping across the bust and hip. Here an elasticized back gives control.

Another floral print is a boy leg cotton duck suit done in shades of blue, green, and purple or beige and brown.

Pink Butterflies

Butterflies prettily cover the surface of a cotton sharkskin one-piece boy leg suit in unusual color combinations of pink and red, orange and brown or blue and green. Another boy leg sharkskin suit has buttons effecting a weskit and comes in red, blue, green, yellow and black.

Very dainty is an embroidered eyelet suit having a V-back and scoop neck. A round belt at the waist adds interest. This suit comes in blue, pink or black.

An interesting cotton is woven in a zig-zag pattern and is in a striking modern print combining stripes and a batik. Stripes in purple, blue, green and coral run vertically, horizontally, and obliquely alternating with the batik print. This skirted sheath also has an elasticized back.

One woven Lastex-content suit appears in this collection. It is a sarong drape with conventional high back and zipper. It comes in a multi-color floral print in soft shades of lavender, blue and green.

Quite distinctive is a Helanca textured filament nylon tunic type suit. It is primarily in a solid color which on the boy leg, low V-back, armholes and V-insert underlining a V-neck, teams with white in narrow stripes. The tunic ends just above the boy legs enabling them to show off their striped edges.

A solid Helanca in blue, red, yellow, purple or turquoise is of a ribbed construction and features a five-button tab up the midriff section. It is a scoop neck, U-back maillot.

Cotton knits are numerous and consist of a multi-color swirl printed sheath with a sweetheart neck and low back; a halter neck maillot with a deep U-back designed in an abstract floral print available in both vivid and soft color combinations, and a circle and line print in plum, pink, lilac, black and turquoise. This maillot is detailed simply by a large self-fabric bow at the bustline.

One Orlon and wool blend is featured. It is a low back sheath with sweetheart neckline, shoestring straps and comes in bright red.

In addition to the one-piece suits by Winky Jr. there are also bikinis and two-piece suits with more coverage than is average. Designing the bikini are white hearts on a red or black background. A drawstring controls the fit and size of both top and bottom.

A two-piece cotton knit gives very good coverage with its conventional trunks and high boat-necked black and white zebra striped top.

Another Record Year For Rose Marie Reid

LOS ANGELES, Calif. — Record sales of $18,274,915 for the fiscal year ending August 31, 1960 were reported at Rose Marie Reid's annual stockholders' meeting held December 15. This was the 14th consecutive

(*Continued on Page* 15)

A WORD OF PRAISE

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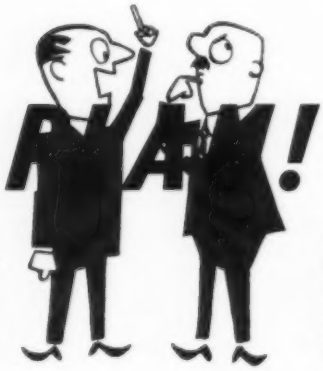

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year in which the company enjoyed a sales increase.

Paul Haberfeld, president, predicted that earnings "could be expected to reverse their recent downtrend now that the congested conditions under which the company operated the past few years have been alleviated by the new plant." The company recently opened a new modern headquarters in nearby Van Nuys.

For the 1960 fiscal year, Rose Marie Reid reported net income of $601,815 or $1.15 a common share, as compared to $655,255 or $1.26 a share in the like 1959 period.

In an analysis of the company's distribution, Mr. Haberfeld disclosed that in the more than 5,000 stores in this country where Rose Marie Reid swim suits are sold, the firm's products account for approximately 41 per cent of the total swimwear volume done. The company has set a 1961 sales goal of $20,000,000, 10 per cent above the 1960 figure, he said.

A new foreign licensee—the company's eighth, has been signed to manufacture Rose Marie Reid swim suits in Argentina. Mr. Haberfeld also reported that the groundwork has been laid to establish a second licensed operation in Europe.

Mill News

Brown-Durrell Company Moving To New Building

CAMBRIDGE, Mass. — Brown-Durrell Co., 88 year old wholesale house for infants' and children's knits and national distributors of brand name hosiery and underwear, is in the process of moving from the three story brownstone plant at 75 Cambridge Parkway, built by the firm in 1947, to a new location at 287 Columbus Ave. in Boston.

The company will occupy all five floors of the building at the new address with offices on the top floor, other floors to be used as stock rooms.

The firm became a wholly owned subsidiary of electronic interests last May in a deal involving the sale of the wholesale house to the Hermes Corp., a tenant and manufacturer of electronic component parts, which was in turn acquired by Itek, Inc., now the parent company of both organizations.

The Brown-Durrell lines for spring have been extended and no changes in management or merchandising operations are contemplated.

Sol B. Luria Resigns From Princeton Mills, Inc.

WATERTOWN, Conn.—Sol Bennett Luria, vice president, Princeton Mills, Inc. has resigned after a 13 year association with the company, a major producer of high-pile cloth and tubular knit fabrics.

In addition to directing labor negotiations, Mr. Luria also supervised the company's research and development activities.

Chadis, Boston Firm, Opens New Offices

BOSTON, Mass. — Chadis Knitwear Company, 75 Kneeland Street, wholesaler of women's sweaters and swimwear, has opened a new suite of offices and a showroom.

Charles Chadis, the proprietor, who was formerly with Chadis-Roth Knitwear Company, said that he plans to resume manufacturing if the trend back to wool develops as now seems likely.

According to Mr. Chadis, the firm's sales in 1960 were up about ten per cent over 1959 and that although the sales unit tended to be smaller, demand was for higher priced items. Long sleeve slipons were favored over cardigans and classics were coming back.

Orlon was selling and Ban-Lon was returning to favor, but the numerous synthetics were confusing retailers and turning them to wool and other natural fibers, Mr. Chadis said. The firm was particularly successful with fur blends, especially in the better quality sweaters.

Weakness in the fourth quarter was attributed to unseasonably warm weather in November.

Mr. Chadis said the extra large bulkies were still selling well and that multi-stitch fabric patterns were contributing to the popularity of the classics.

Some weakness was noted in coordinates. The firm expects more mixing than matching in the coming year. Pastels, especially lemon and lilac will be

(*Continued on Page* 16)

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STOLL "JBO" Hand flat knitting machine, type "Industry". High and low butt needles; 4 yarn slide bars; striping attachment for 4 colors; mechanical 2:2 attachment, which can also knit 1:1 stitch and tuck in same row. On request, plush and plating attachments. 40" and 48" width. Gauges 2½ to 14.

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popular, gold will decline, stone mist green will replace sage.

A strong spring market is foreseen for cotton T shirts for wear with Jamaicas, pedal pushers and slacks. It is estimated that the average consumer will buy three T shirts to every pair of pants.

Bulkies in every shade, and a seven-button Orlon cardigan with raglan sleeves, two pockets, and rickracking on the wide round collar edged with an inch of ribbing, were selling well.

The firm's line of swimwear opened the first of the year. Retailers, Mr. Chadis said, now insist that the retail selling price be shown on the ticket.

In forecasting the coming season, he said that knit suits will appear in greater numbers and Helanca will continue as a favorite. Two most important features will be the separated stand-away bra and detachable straps.

Knitting Co. Formed

UNION CITY, N. J.—Howard Werth and Arthur Weiss have announced the formation of Roelle Knitting Mills, Inc., 510 22nd Street.

William B. Carr Leaves Koret Of California

SAN FRANCISCO, Calif. — William B. Carr has resigned as advertising manager of Koret of California. He has not yet announced his future plans.

Yarn Suppliers

New Offices And Staff For J. L. Stickley Co.

Robert F. Branscombe was appointed New York office manager for the John L. Stickley Co., knitting yarn sales agents. Ed Morgan has also joined the New York sales staff.

Part of Stickley's New York office has been moved to 358 Fifth Avenue from their previous location at 112 West 34th Street.

Glen Raven Promotes Flood To Division Head

R. Sidney Flood has been named director of the Glen Raven Yarn Division. He will be in charge of sales and new yarn developments.

Mr. Flood has been with the firm for over twelve years, most recently in sales and fabric development.

Fibers

American Cyanamid Co. Raises Acrylic Prices

American Cyanamid Company fibers division has increased the prices of Cyanamid acrylic fiber. The prices of 3 denier and 5 denier staple were increased four cents per pound to $1.22 and the price of 15 denier staple was increased two cents a pound to $.95. The changes cover both bright and semi-dull staple.

Edward Szlosberg Joins Chemstrand Research

DECATUR, Ala. — Edward Szlosberg has joined the application research and service department of The Chemstrand Corporation. He has been with Color Knit Dyeing Corporation, Elizabeth, N. J.; Sandoz, Inc., New York City; and Beaunit Mills, New York City. During World War II, he was a pilot in England's Royal Air Force.

Durene Association Elects New Officers

Freeman R. Harris, vice president, Standard-Coosa-Thatcher Company, Chattanooga, Tennessee, has been elected president of the Durene Association of America at its annual meeting. He replaces R. D. Hall, Jr., American Thread Company, whose term has expired.

Others elected at the meeting at the St. Moritz Hotel were Milton Meyers, vice president; and W. H. McDonald, treasurer. Mr. Meyers is president of Clarence L. Meyers & Co., Philadelphia. Mr. McDonald is vice president and treasurer of Southern Mercerizing Company, Tryon, N. C. A. C. Layton Newsom was re-elected executive secretary.

Member firms of the Durene Association include: Aberfoyle Manufacturing Co.; American & Efird Mills, Inc.; The American Thread Co.; Boger and Crawford, Inc.; Dixie Mercerizing Company; Clarence L. Meyers & Co.; Sellers Mfg. Co., Inc.; Southern Mercerizing Company.

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Women's & Misses'

Goodwear Stresses Novelty Styles And Surface Textures In Spring Line

In its spring and summer sweater-blouse line, Goodwear Sportswear, Inc. is offering a wide variety of knitwear for ladies and also a considerable selection for the 7 to 14 age group. Executed in 100 per cent cotton, these novelty knits come with round, square, scoop, boat and V-necks; wing, Peter-Pan and rounded collars; sleeves that vary in length to sleeveless numbers; and in pullover and cardigan styles.

Silhouette diversifications lie also in tuck-in and overblouse styles. The latter may be finished with ribbed or piped edges, poncho bottoms, elasticized waists and slit sides.

Surface interest is observable in allover textured structures, self-textured diagonal stripes, screen prints, appliques and flat and textured multi-color stripes.

Perhaps the most unusual of these novelty tops are the screen printed and appliqued numbers. Two styles knitted of cotton Alamac Permathal are a three-quarter sleeve model with a boat neck and a short-sleeved model with a collar and V-placket. These shirts are all highlighted by vividly colored motifs printed across the front.

A little girl and fox design is done in red, black, beige and green on a white background. Here the applique consists of a braid trim on the girl's hat and rhinestones trimming her riding breeches.

A sea motif showing several fish and underwater objects is colored in soft shades of lilac and aqua outlined in black on white. Multi-color pearl appliques are placed strategically to simulate the fish's eyes and fin tips.

Also clever in this grouping are Chinese children flying a huge fish-like kite against mountain background and imaginative sun. A gold dot applique is featured in this scene which is done in red, blue, beige and black on white. A fourth screen print motif is a smiling scarecrow with a large daisy applique on its hat and three buttons on its baggy shirt.

Other screen prints include a patch design on a short-sleeved boat neck tunic blouse with all around elasticized waist, and a little girl print superimposed upon a striped background. The first print is etched in black on lilac, gold, olive or white, and the multi-color little girl print comes on striped backgrounds of gold, green and purple with white.

Interesting surface texture is achieved in a knitted-in diagonal stripe. This fabric construction comes on an overblouse model whose square neck is highlighted by a little bow at each corner. Further surface interest is created through the incorporation of vertical stripes in gold, purple, blue or green with white.

This textured oblique stripe also comes in several solid colors including lilac, gold, pink and blue. The lines of a V-neck number are echoed in its poncho bottom, and there is also a collar and placket style and a boat-necked style both of which come with a straight bottom edge.

Another textured stripe achieves interest through use of two narrow stripes and a pencil thin stripe to set them off. Blue, gold, green or red combine with white, while black is always used as the thin highlighting stripe. The style of this number is a V-neck short-sleeved cardigan, the neck and placket of which are rib trimmed.

Sleeveless numbers, so popular for summer, include a six-button cardigan model done in a tweedy stripe in muted tones of olive, red, blue and beige on white. This sweater-blouse features a V-neck, Peter Pan collar and solid white rib trim at the waist and sleeve openings.

Another sleeveless model comes in an allover textured popcorn stitch. This pullover with placket front features contrast stitching and stripe detail on sleeve opening, collar and placket. Pastels combine with white for the stripe detail and a white sweater-blouse is offset by a bright red trim. A final sleeveless number is a finely textured horizontally striped blouse with a V-placket and wing collar. It comes in white and several pastels.

A solid color man-tailored shirt is part of this collection composed in the main of novelties. It is a flat-surfaced knit and features button trim on the tip of each collar point and a four-button, very deep placket. It comes in lilac, gold, olive and white.

Supplementing the collection of sweater-blouses, is a knitted jacket that comes in one style but is given several different surface treatments. It is a no-button cardigan style with three-quarter sleeves and tuxedo front and is available in a finely textured, two-color bold stripe, a heavy popcorn stitch with black, olive or gold on white, and a thickly textured pique in all white. Some models can be had with an emblem.

(*Continued on Page* 18)

Four examples of Goodwear's cotton knit blouses are an Alamac Permathal overblouse with a screen-printed Chinese motif, upper left; a tailored short-sleeved shirt with four-button elongated placket, center; a tunic overblouse with elasticized waist printed in a patch motif, upper right and a vertically striped, short-sleeved tunic whose waist is defined by a self-fabric tie, lower figure.

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New in Goodwear's line are cotton knit coordinates consisting of striped tops and solid color lined pants running the length gamut from shorts to long slacks. The tops are striped horizontally and vertically and feature solid color trims to match the pants. They come with a variety of neck, collar and lower edge treatments.

Goodwear's biggest fall items are high-pile Orlon tops. These numbers have sold exceptionally well in the past and it is expected that they will retain their popularity for the forthcoming season.

These pullover and cardigan tops come in a wide range of colors and offer many silhouettes through a variety of collar and placket styles, slit and straight sides, boat and cowl necks and a stunning jewel neck on a cardigan with five large pearlized buttons and one pocket on each side of the lower edge. There is also a sleeveless version with a boat neck and multi-colored striped front.

PEKOMA Told Outlook Is Good

(*Continued from Page* 1)

spirit of cooperation and interchange of ideas fostered within PEKOMA and the mutual goals of management and the union people in the industry. He called on the industry in Philadelphia to 'tap the ingenuity and creativity of the union people by calling upon them for ideas to continue the industry's forward strides."

Despite the fact the trends during the past year have been contradictory and there has been some complaining, shipment figures for the first three quarters do not "seem to offer much grounds for complaint," Mr. Korzenik noted. Shipments by the industry of women's, misses' and juniors' sweaters for the first three quarters of 1960 were only about three per cent off from the record-breaking 1959 figures while shipments of men's sweaters for the first 10 months of the year were only off by one per cent from 1959. But he pointed out that disappointing results appear to have followed in the last few months of the year.

During 1959, the industry shipped a record breaking total of 15¼ million dozen sweaters, which was 1½ million dozen over the previous record year of 1958..

When figures are in, the last few months of the year will likely show a bad falling off. Although this is somewhat due to some economic apprehension sensed throughout the economy, it is in large measure a consequence of the fact that imports of knitted goods, particularly sweaters, reached a new high during the year, Mr. Korzenik said, estimating that over a half million dozen wool sweaters alone, mainly in the low price category were imported into this country.

The three main problems facing the industry are foreign competition, high labor costs, and the difficulties and hazards of increased style diversity, Mr. Korzenik declared.

The industry must strive for greater efficiency, greater productivity, and a "sensible" labor policy, to reduce unit costs which have in some areas gotten "out of hand," Mr. Korzenik said.

Even though the industry takes on new production problems and new financing risks by style diversity, these are necessary risks, Mr. Korzenik noted. 'There will still be a premium on new ideas. Ingenuity in our industry is far from exhausted," he declared. "New ideas are the yeast which sets in foment the activity that means industrial progress."

Mr. Korzenik noted in reviewing the progress of the decade that the estimated $1 billion of volume for the industry as a whole and in all its branches in 1960 compared with about one-third that amount in 1950. Veterans in the industry can recall, he said, how incredible to the 1950 thinking were some of the ideas that later came to be adopted and contributed so greatly to the industry's advance. The ideas that will make the future, were they to be revealed now, might seem just as strange. Yet, success in the years to come will lie with those, he said, who are keen enough to see their value, and daring enough to put them to use.

Other new officers of PEKOMA elected at the meeting are: first vice president, Albert Cohen, Franklin-Philtex Mfg. Co.; second vice president, Max For-

(*Continued on Next Page*)

Ingram Bergman, Bergman Knitting Mills, a past president and a director of the Knitted Outerwear Manufacturers Association, Pennsylvania District, presents illuminated elegy memorializing the late H. H. Cohen, former counsel of PEKOMA, to his widow, Mrs. Clara Cohen, at PEKOMA's annual dinner meeting on December 19. The elegy was written by Mr. Bergman.

Elect New Officers At PEKOMA Meeting

(*Continued from Page* 18)

man, Devon Knitwear. Gideon Frankil, Union Knitting Mills, was reelected treasurer.

Elected to the board of directors were William Myers, M & M Knitting Mills; Aaron Frank, Na-lor Mfg. Company; Robert Bernstein, Infanta Knitting Mills; Benjamin Greber, Glasgo Ltd., Inc.; Stanley Soowal, Jacquard Knitting Mills; Martin Orliner, Bergman Knitting Mills; Morton Pauker, Tartan Knitting Mills; Jack Rosenblatt, Forrest Knitting Mills; Paul Silver, Girard Knitting Mills; Albert Kraftsow, Somerset Knitting Mills; Harry Rutman, Crescent Knitting Mills, Jay Lipsey, The Jay Company, and Mickey Wexler, Clover Knitting Mills. Past presidents Ingram Bergman, Max E. Falik, Abe H. Liebster, M & M Knitting Mills; Harold L. Neuman, and David Rosenblatt, also are board members.

Mr. Liebster was named chairman of the Trustees of the Retirement Fund. Other trustees are Jack Rosenblatt, Ingram Bergman, Max E. Falik, and Joseph Specker.

Plan Wharton School Stipend Honoring Cohen

PHILADELPHIA, Pa.—Plans are under way in the industry here to create a $10,000 scholarship fund for graduate fellowships in labor relations in the name of the late H. H. Cohen, counsel for the Knitted Outerwear Manufacturers Association, Pennsylvania District for over 40 years, at the Wharton School of the University of Pennsylvania.

A number of voluntary contributions to the fund have already been made by members of the industry. Spearheading the drive to create the scholarship fund is Harold L. Neuman, president of Robert Bruce, Inc., who serves as unofficial chairman; Max E. Falik, Charles Peberdy & Son; Ingram Bergman, Bergman Knitting Mills; and David Rosenblatt, Forrest Knitting Mills, immediate past president of PEKOMA.

Mr. Cohen, who died last autumn, was instrumental in formation of PEKOMA and served as its counsel from its inception until his death. For a number of years he also served as the executive secretary but relinquished this post some years ago.

Gov't Procurement

Award Made To Beaunit

PHILADELPHIA, Pa.—The Military Clothing and Textile Supply Agency has made an award under QM-372 for nylon knitted cloth, 9.5 oz. per sq. yd., green, unshrunk, 43 inches wide, to Beaunit Mills, Inc., New York, for 50,000 lineal yards at $1.695.

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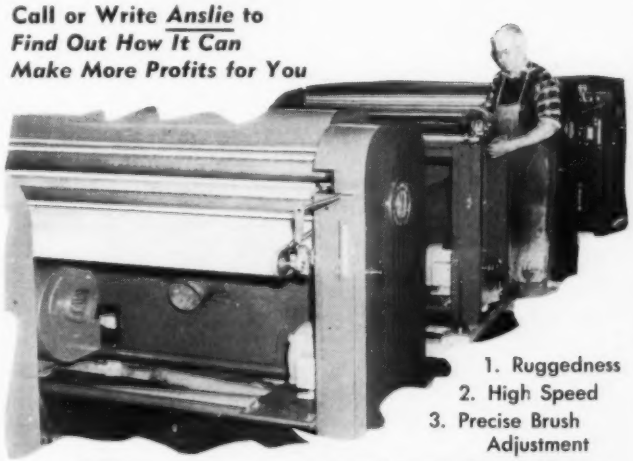

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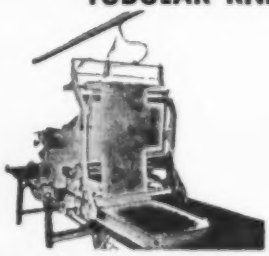
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Specialty Fibers

Scottish Mills Concerned Over Shetland Move

GLASCOW, Scotland (Via Scottish Amalgamated Trades News Agency)—Current moves in Shetland to organize spinning of Shetland yarns within the islands are being watched with considerable interest by knitters in the main Scottish knitwear centers. Shetland wool has been spun at a number of mills in the north of Scotland, and either returned to Shetland or distributed to the knitting mills in the South which specialize in Shetland garments.

Although these are few in number, they produce a substantial output each year, and have done a major amount of work towards the popularization of Shetland garments abroad. The techniques involved in machine knitting of this yarn have been mastered, and appropriate styling evolved to publicize and develop Shetland garments in the man export markets.

The American market has taken a very considerable proportion of the output from the mainland knitting mills and are still actively interested in Shetland garments, either 100 per cent or blended. The current proposals may not interfere with that pattern, and from the export point of view, any disruption of present flow of Shetland wool would be a matter for concern.

The real danger inherent in the current development, as seen by the mainland knitting mills, is the possibility that a further move would follow. This might rule that Shetland wool should be retained within Shetland, to allow the operation of a brand label guaranteeing that the product was from wool grown, spun and knitted in the islands. That could well be a long-term object of the present move, although, obviously, it would demand the development of knitting facilities on commercial lines, which do not now exist. No such policy has yet been publicized, but it is the obvious development of a move to restrict spinning to Shetland.

If that move were carried further and the entire supplies retained within the area, the mainland knitting mills would naturally suffer through loss of a yarn which has been extremely valuable to date. The alternative policy might be to develop other fibers in competition with Shetland, and already quite a substantial trade is being done in mohair, camels hair and in blended variations of these fibers with wool. From the mainland viewpoint, the hope is maintained that yarn will be continuously available to those knitters who have already pioneered the trade, and that no exclusive-manufacturing policy will be adopted to the disruption of existing markets.

Synthetic Fibers

Avisco Rayons Have Golden Anniversary

MARCUS HOOK, Pa. — In 1910, American Viscose Corporation's plant here produced the first commercially successful strand of rayon in the United States. Today Avisco rayon fibers, developed and modified by a half-century of research, have branched into a wide variety of end uses.

One of its newest rayon fibers, Avril, is said by the company to be the strongest rayon staple ever developed for the textile industry with a stability equal to, or greater than cotton, an unprecedented achievement by a cellulosic.

Avril is going into blouse and dress fabrics and being widely market tested in men's shirts. Fabrics made from it will readily accept compressive pre-shrinking, according to the company.

Another new modified rayon fiber is Avron, marketed under quality control requirements. Avisco markets it as an ideal blending fiber, whose high strength permits the spinning of finer yarns.

Another is Avlin, a multicellular rayon fiber in limited commercial production, currently being evaluated in apparel. It is said by the company to be the only fiber of its type on the market, with self-bonding properties for greater firmness and bulk, a crisp hand and touch and an unusual shape that produces a slight sparkle and glitter not obtainable with conventional rayons.

(Continued on Next Page)

Use of the name Avlin is confined to fabrics that meet the Avisco standards of quality control. Samples of the finished goods are tested for fiber content, construction and performance.

All of these fibers resulted from cellulose chemical research, confounding those cellulose chemists who were predicting five years ago that rayons could not be given greater strength and stability.

Market For Creslan Broadened In 1960

American Cyanamid Company's Creslan, acrylic fiber, entered into the outerwear, carpet and pile liner industries in Cyanamid's fibers division has noted in its year-end report.

A 80 per cent Creslan, 20 per cent modacrylic was introduced in a knitted broadloom carpet which sold well despite a generally poor carpet season. More Creslan will be used in carpets, the company said.

Pile liner and outerwear fabrics of 100 per cent Creslan acrylic were introduced by two of the principal mills, Borg Fabrics Division of Amphenol-Borg Electronics Corp., and Collins & Aikman Corp. Collins & Aikman fabrics of 100 per cent Creslan bear the trademarks Sherpa and Sherpa-Tu. Among other developments were strong penetrations of the men's sock and sportshirt markets and women's suits, dresses and sportswear.

Charles P. Bertland, assistant manager of the fibers division, said Cyanamid wants to create a strong quality image for Creslan. A control program withholds use of the Creslan trademark until finished fabrics and knit products have met prescribed quality and performance standards.

Knitting Arts

Visitors Worth $2 Billion To Attend Apr. 24 Show

Companies participating in the 45th biennial Knitting Arts Exhibition, next April 24 in Atlantic City, N. J., will face a $2 billion audience.

The 13,000 persons in attendance at the four-day exhibition will represent firms from the U.S. and foreign knitting industries which will spend aproximately $2 billion during 1961-1962 for the types of materials, equipment, supplies and services on display. The estimate was made by the National Association of Hosiery Manufacturers, National Knitted Outerwear Association and the Underwear Institute, sponsors.

More than 200 firms will unveil latest advances in dyeing equipment, knitting machinery, packaging machinery, chemicals, dyestuffs, laboratory equipment, textiles, yarns, power apparatus, mill equipment, motors, as well as other products and services utilized by the industry.

The American knitting industry produces annually two billion pairs of hosiery, a billion outerwear items and 80,000,000 pounds of knitted fabrics.

Warping Sparkling Nylon For Knitting

LONDON, England — After extensive laboratory and service research, British Nylon Spinners have released advice on methods for using the nylon monofilament, variously described as "sparkling," "sparkle" or "glitter" yarn, to secure the best optical effects for warp knitted lingerie. (Editor's Note: These yarns are similar to Antron, tri-lobal filament and Cadon multi-lobal filament).

A cross-section of the filament resembles an equilateral triangle with rounded corners, says the report. Rays of light falling on the variously presented facets penetrate the yarn readily (it contains very little delustrant); they are reflected internally, and after being intensified by a focussing effect of the rounded "angles," they emerge again as innumerable minute scintillations.

Knitting performance is excellent. As might be expected, the glitter effect is most striking in fabrics dyed in light shades. Warping this yarn is a straightforward matter, in almost all respects resembling the procedure for standard (circular cross-section) nylon monofil.

One special characteristic of the sparkling yarn is that its flat sides prevent it from rolling freely when in contact with tensioning devices and guides. Simple safeguards must, therefore, be observed to guard against twist being rubbed back; if they are not observed, the yarn will behave as if it were twist lively.

(*Continued on Page* 23)

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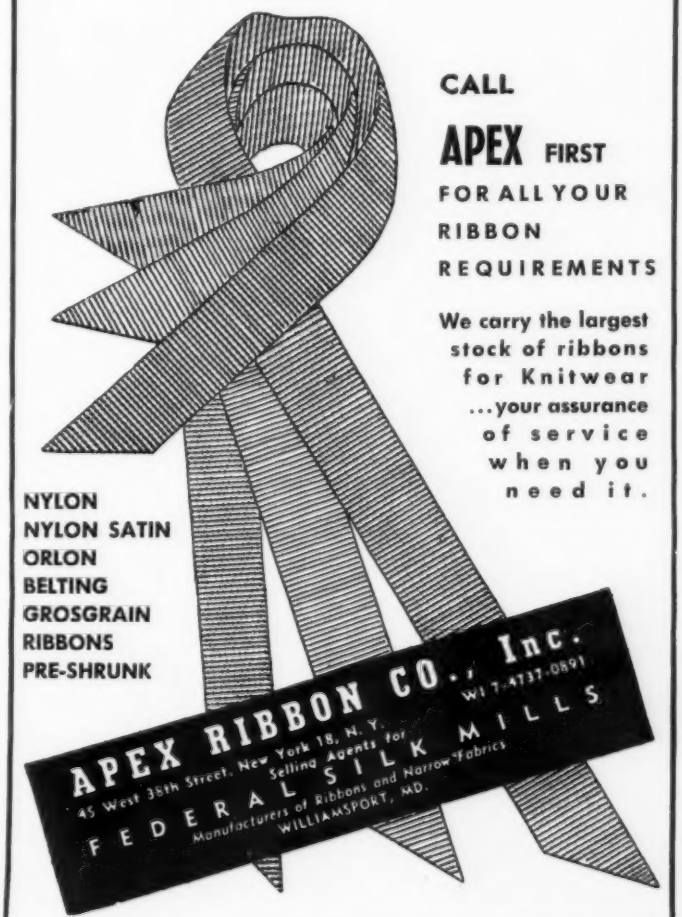

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The suggestions that follow offer, it is believed, convenient warping procedure:

1. The tendency to twist liveliness must be counteracted by adequate tensioning; neither the warp sheet nor individual ends should ever be allowed to slacken. A tension of 5-6 grams per end (measured after the final reed) is satisfactory. Disk tensioners are preferred. (Spinner tensioners are not suitable).

2. As with all fine denier monofilament yarns, direct warping is preferable to indirect.

3. The yarn path should be as simple as possible, and the number of contact points kept to the minimum. Ancillary apparatus (e.g., for back winding and yarn fault detection) should be omitted; if such devices are used they should not be allowed to deflect the yarn from a straight path.

4. A static eliminator, mounted over or under the warp sheet as it converges on the final reed, is advisable.

5. Because it is important to keep the yarn ends well separated, guide-eye boards are preferable to reeds (except for the final reed).

6. If an end breaks the lost end should be left on the beam, and the end from the creel tinted for recognition and placed on the beam. This is preferable to using a back-winding device which may give rise to slackness and snarling.

Knitting Machinery

Wildman Jacquard To Stock Parts At So. Office

NORRISTOWN, Pa.—Wildman Jacquard Company will maintain a stock of repair parts for their jacquard knitting machines at the company's High Point, N. C. office.

Robert Dott, sales manager, said the decision to stock repair parts for the Jacquard knitting machinery was made because of the increase of sweater knitting mills in the South.

A complete line of Hemphill machine repair parts will also be available at the High Point office.

Eli Steinberg, Brooklyn, Selling 2 Types Of Swift

Two winding machine swifts are being marketed to knitters by Eli Steinberg Co., 204 Grand Street, Brooklyn.

The Atwood, Crawford Adjust-o-Matic covers skeins from 54 to 78 inches. It is constructed of stainless steel wire and preferred for bleached yarn. Its outstanding feature, acording to the manufacturer, is automatic maintenance of uniform tension on the skein.

The unit also is said to be instantly adjustable to the size of the skein, easily opened and capable of spooling the yarn to the last inch.

Steinberg's other swift is an adjustable for Foster winding machines, known as the G type. It covers skeins form 46 to 72 inches and comes complete with weight pin and leather strip.

Scott & Williams Names Plant After President

LACONIA, N. H.—The new building at Scott & Williams, S.A. in Bruges, Belgium, has been designated the Richard H. Whitehead Plant by the board of directors. Mr. Whitehead is the president of the company.

Trade Education

PTI Changes Its Name

PHILADELPHIA, Pa.—The Philadelphia Textile Institute has changed its name to Philadelphia College of Textiles and Science.

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Engineering of Warp Knit Fabric

(*Continued from Page* 9)

depending on the type of lap used (open or closed). If a closed lap is employed, which is generally the case, then one full turn of twist is put in or taken out (depending on the direction of yarn twist and guide bar movement) of the section of thread contained between the guide hole and the sinker throat. Since this length is approx. 1/20 inch on a 2 bar machine, the change is twist is ±2 tpi.

There is little possibility of this twist propagating into the thread portion above the guide hole owing to intimate contact between the yarn and guide blade.

A much greater modification in twist is produced by the effect of yarn bending which occurs when the threads arriving at the knitting point in almost vertical plane are kinked into loops disposed in a horizontal plane. The torsional strain imparted to yarn when bending is over 90 adds each loop ¼ turn of twist. Because the loops have a "V" shape, the direction of twist in each loop member will be opposite.[51]

The magnitude of twist produced by torsion may be of a surprisingly high order. For example, on back bar jersey with a runner of, say, 48 inches, the length of yarn in each complete loop plus connecting lap is 48 : 480 = 1/10 inches, and each loop member—1/20 inches. Since each member receives ¼ turn of twist, the yarn will end up with a difference of ¼ : 1/20 = ± 5 tpi over the twist content at the instance of entering the knitting point. This tpi value will be modified by redistribution of twist in the fabric structure after completion of knitting.

Shrinkage potential — The majority of textile materials exhibit varying degrees of shrinkage when exposed to the action of heat (either dry or wet) and/or chemicals. Some fibers, such as glass, shrink very little, others like polyethylene or vinyon shrink a great deal.

The shrinkage affects dimensions of both yarn and fabric. The yarn contracts in length and expands in diameter to increase its denier value. Also, its elastic properties undergo certain modifications. In case of high shrinkage thermoplastic yarns, these modifications may become quite considerable. The shrinkage of yarn produces consolidation of the fabric through reduction in its area and increase in bulk.

Materials of high regain contract because of swelling action which improves the fabric cover and bulk. Rayon, for example, swells on scouring up to 60 per cent of its cross sectional area. As the rayon swells and gets bigger in diameter, the loop members are pushed inward to make room for the increased thickness of the yarn. This pressure causes the loops to contract and consolidate the fabric. Consolidation of newly knit fabric must not, however, be attributed solely to yarn shrinkage since relaxation of the loop structure is also a contributing factor.

The amount of contraction incurred by the yarn depends, in addition to its natural shrinkage potential, on the strains exerted on it in the course of warping, knitting and the severity of subsequent wet and thermal treatment. For example, 15 denier nylon monofilament on pirns has a residual shrinkage potential of approximately 11.5 per cent (meaning that 100 inches of monofilament left free to relax under influence of heat will come in to 88.5 inches. The yarn, however, when transposed into fabric is rarely allowed to attain this figure since the heat setting operation is carried out under conditions of tension which constrains the fabric and precludes complete relaxation.

Certain yarns of polyvinylchloride yarns such as Vinyon or Rhovyl exhibit a very high residual shrinkage. Rhovyl will contract up to 55 per cent of its initial length. Because of such fierce shrinkage potential, Rhovyl may only be used for development of surface pattern effects like knops, puckers, blisters, etc. on a ground knit with yarn of average shrinkage value. A 100 per cent Rhovyl fabric would on boiling consolidate into an almost solid sheet. Novel pattern effects may also be obtained by using yarn in regular

(*Continued on next Page*)

and preshrunk form, e.g. nylon on pirns and nylon preshrunk in steam. Both such yarns are warped together and threaded in groups according to design. On exposure to heat, the regular nylon contracts while the preshrunk does not. This produces various puckered, smock, plisse and similar effects of surface interest.

Differential shrinkage properties are used with advantage in the manufacture of fancy yarns and deep pile cloths. The fancy yarn is produced by plying a high shrinkage thermoplastic material with one of relative intensitivity to heat (e.g. polyethylene and cotton). The action of heat will shrink the thermoplastic component and induce the other to twist, kink and crimp around the first.[52] The deep pile for imitation furs is made with one set of threads of a low temperature thermoplastic material (polyvinylchloride type) and another of high temperature thermoplastic yarn, e.g. Orlon.

This is necessary to produce a pile construction resembling proper fur features by a coat of short hair for warmth and long hair for protection (guard hair). By suitable heat treatment, the polyvinylchloride component shrinks and produces the low pile, while the Orlon component remaining virtually unshrunk, provides the equivalent to the protective high pile. A similar effect is obtained by using a yarn of regular high-bulk type, e.g. standard and high-bulk Dynel and/or Orlon.

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Factoring

Talcott Promotes Three To Executive Positions

Richard C. Bosch has been named assistant vice president of James Talcott, Inc., industrial finance company, and assistant credit manager of the factoring division. Bruce D. Classon and Hooker Talcott, Jr. have been elected secretaries.

Mr. Bosch has been with the factoring division 28 years. He is a member of the Town Timer's Credit Club, the National Institute of Credit and the N. Y. Credit & Financial Management Association.

Mr. Classon, who joined Talcott in 1958, is an account executive in the retail and non-notification factoring department.

Mr. Talcott joined the Chicago office in 1958 and, earlier this year, was transferred to the New England regional office in Boston, where he is a credit executive in the commercial finance division.

Sargent, Iselin President, Named C.I.T. Director

Charles S. Sargent Jr., president of William Iselin & Company, factors, has been elected a director of C.I.T. Financial Corporation, succeeding Morton Goodspeed, retired president of Iselin.

Mr. Sargent joined Iselin in 1935, was elected executive vice president in 1959 and last February succeeded Mr. Goodspeed as president and chief executive.

Iselin was founded in 1808, and its factoring business was acquired in 1932 by C.I.T., owners of Commercial Factors Corporation and Meinhard & Company, Inc.

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AATT

Cheatham To Speak At Feb. 8 Meeting

J. M. Cheatham, president of Dundee Mills, Inc. and president of the American Cotton Manufacturers Institute, will deliver the banquet luncheon address at the annual meeting of the American Association for Textile Technology on February 8, 1961 at the Hotel Commodore, New York City. The subject of his talk will be, "The Impact of World Events on Fiber Technology."

The meeting will be the first annual sesion of AATT since its reorganization last January to provide for the operation of chapters. The three chapters of the Association are: New York, Piedmont and Appalachian. Theme of the meeting is, "The Challenge of Modern Fiber Technology."

The one-day conference-type program will be open to all members of the textile industry. It will explore the question of how to cope with the many problems raised by the flood of new man-made fibers and fiber modifications. The program committee will soon announce a roster of 32 leading figures from the textile industry, retailing and related groups who will appear in four panels. Questions for the panels will be polled from registrants.

Members of the annual meeting committee are Albert E. Johnson, National Institute of Drycleaning and a director of AATT, general chairman; Administrative chairman A. H. McCollough, Modern Textiles Magazine, official publication of the papers of AATT, Program; C. J. Waitkus, E. F. Drew & Co., Inc., Registration; Harry Martin, Manhattan Shirt Co., publicity; Andrew Strom, Waumbec Mills, Inc., hotel arrangements. Registration cost including the banquet-luncheon will be $15. Advance registrations may be made directly with Mr. Waitkus.

Hosiery

Portage Introduces Styles

PORTAGE, Wis.—Two completely new socks, one a cushion sole and the other a thermal style, have been announced by Portage Hosiery Co.

Both sock styles are being produced on a battery of new Scott and Williams ETR knitting machines, which have been installed recently at the Portage plant.

Portage officials claim to be the first knitting company in this country to utilize these new machines, which produce a coarse-gauge, genuine terry knit in a wide variety of wool content combinations.

First showing of the new socks will be made at The National Association of Textile & Apparel Wholesalers Convention in New York from January 16-18. They will be an integral part of the new Portage sock line for 1961.

Textured Fabric

Stretch Lace Of Du Pont Nylon Developed By N.Y.

A stretch lace of Du Pont nylon, has recently been developed by Lace Art Company, New York City. Available in an Alencon-type pattern, both sheer and with backing, the lace currently is being cut by many panty manufacturers and has been sampled by swimwear, glove, girdle, and brassiere firms.

Leotards are regarded as another possible end-use for the lace, which is 48 inches wide and has a four yard yield in the open mesh and a three-and-a-half-yard yield in the opaque version.

31 Swimwear Companies In NKOA Fashion Show

(*Continued from Page* 1)

Mills, Inc.; Darlene Knitwear, Inc.; Annis Originals, Inc.; Bestlyne Co.; Garwin Corp.; Brilliant Sportswear; Roxanna Swim Suit Co., Inc.; Glen Mfg .Co. (Petti Division); Brookshire Knitting Mills; Par-Form; Sinclair Knitting Mills, and Hy-An Modes, Inc., Brooklyn.

California firms represented will be Rose Marie Reid, Van Nuys, and Elizabeth Stewart Swimwear, Bell Gardens, and DeWeese Designs; Cole of California; Catalina, Inc.; Sebastian Knitting Mills; Sirena, Inc.; Maurice Handler of California, Inc. and Westwood Knitting Mills, all of Los Angeles.

Others will be Jantzen, Inc., Portland, Ore.; Lee Beachwear Co., New Haven, Conn.; Harmon Knitwear, Inc., Marinette, Wis., and U. S. Knitwear Co., Portchester, N. Y.

INDUSTRY'S MARKET PLACE

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MACHINERY WANTED—FOR SALE

FOR SALE

3—MLW machines, 28", 960 needles, 24 feed, 4 color stripers on each feed. Can make body lengths, yard goods, Jacquard or wheel designs. In perfect running condition. Can be seen in operation.

BOX 420K

WANTED TO PURCHASE

1 or 2—21 gauge full-fashioned knitting machines.

BOX 534

WANTED

4—3 needle rack Leighton knitting machines, 4, 5, or 6 cut.

BOX 536

WANTED

DRYER: of a type suitable for the drying of tubular-knit piece goods. In reply, please state manufacturer, type, year, size, and price.

Kran-Mer Industrial Dyers, Inc.
2433 North Third St., Milwaukee 12, Wisconsin

BEST JK BUYS

LIQUIDATING COMPLETE KNITTING MILL CONSISTING OF — KNITTING, PRESSING, SEWING & STEAMING DEPTS.

2—Roby, 96", 7 cut, double jack flat L. & L.
2—Philip Mach., 32 feed, 30", 18 & 18½ cut
1—S&W Interlock, 32 feed, 16½ cut, 30"
4—Phila. Jacq. TAI, 8½, 12, 13½, 16½ cut, 30", 12 feed, 4 col. strip.
1—Phila. Jacq. TJ, 10 cut, 30", 12 feed, 4 color strip.
1—Phila. Jacq. TJ, 8 cut, 28", 6 feed, 4 col. strip.
1—Phila. Jacq. TJ, 16", 7 cut, 4 col. str.
1—Phila. Jacq. LHB, 4 cut, 30", 6 months old
2—Phila. Jacq. LH, 6 & 8 cut, 30" & 28", 6 feed
1—O.G. 32", 36 feed, 8 cut, multi-feed jersey & 1x1 rib
2—Phila. Jacq. LA 30", 12 feed, 7 & 10 cut, 3 col. str.
2—Leighton transfers, 6½ & 10 cut, 32" & 34", 9 feed, 4 col. str.
8—Phila. Jacq. TA, 11" to 20", 4 feed, 6 to 12 cut
1—Phila. Jacq. TA, 30", 12 cut, 12 feed, extra cyl. & dials
1—Phila. Jacq. MLW, 28", 11 cut, 24 feed, automats & wheels
4—Wildman PB2, 15", 17", 18", 22", 8 and 10 cut
2—Queens Model "B", 60", 9 & 12 cut, High & Low needles, Jacks
2—Lamb double head border machines, 7 & 8 cut, with motors
1—Dubied Flat, 44", 7 cut, high & low needles
1—Dubied BAN, 56", 12 cut, Jacquards front & back
1—Supreme flat mach., 5 cut 26"
6—Cissel Tumbler Dryers, 30" x 36"
2—Wildman interlock, 23", 21 feed, 10 cut
1—Universal Supramat, 62", 8 cut, like new
1—Roto-Coner section, 20 spindles
5—Reiner full-fashioned mach., 21 gauge, special attachment

Joseph Kopelowitz, Inc.

600 Broadway, Brooklyn 6, N. Y. EVergreen 7-1145

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WANTED

TJI 14¼ machine. Must be in perfect running condition. Give serial number and price in first letter.

BOX 420J

INTERESTED IN PURCHASING

10 cut flat knitting machines. Universals or Stolls.

BOX 530C

WANTED-IMMEDIATELY

5 cut Stoll Ajum or a comparable machine.

Beautex Mills, Inc.
227 W. 29th St., New York 1, N. Y.
PE 6-1936

FOR SALE

Flat Links machines: 74", 62", & 48".

HYacinth 7-0400

FOR SALE OR LEASE

Complete Full-Fashioned 9 Gauge Plant Unit

1—13 section Reading full-fashioned machine, 9 gauge, 6 cut.
1—Stoll flat machine, 7 gauge, Model JBOM/B.
9—Looping machines, 6 and 7 point.
3—Union Specials (for above).
1—Pressing machine.
Ideal for double jersey dress tops or sweaters—ready to operate.

BOX 520C

YARNS WANTED, FOR SALE

FOR SALE
ELASTIC YARN FOR KNITTING
● All Sizes and Colors

BEDFORD YARN CO.
79 Clifton Place
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WANTED
COTTON, WOOL, WORSTED & SYNTHETIC YARNS
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We always carry a large stock of yarns, dyed on cones for immediate use.

CALL EV 8-8277
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WE BUY SURPLUS KNITTING YARN
Machine and Hand Knitting Sizes
WALTER McCOOK & SON, INC.
711 Arch St. Phila. 6, Pa. WAlnut 5-8891

NEW YARN OFFERINGS!
AT ATTRACTIVE PRICES

500 lbs.—single 12's, natural, worsted, perf. tubes
5,500 lbs.—2/20's, 100% worsted, assorted colors, cones
1,500 lbs.—2/24's, natural, Orlon, skeins
6,000 lbs.—small lots wool, assorted colors, 2 to 4 run
750 lbs.—2/14½'s, natural, Orlon, cones
400 lbs.—2/15's, 70% angora, 30% L wool, colors, cones
1,000 lbs.—5 run, 70% wool, 20% fur, 10% nylon, colors, cones
400 lbs.—single 21's, natural, Orlon, cones
1,100 lbs.—3 run, forest green, 100% wool, cones
750 lbs.—single 20's, natural, Orlon, cones
1,000 lbs.—3 run, gold, garnetted Orlon, cones
1,000 lbs.—single 26's, 80% Orlon, 20% wool, cones
1,500 lbs.—3 run, moss green, garnetted Orlon, cones
2,000 lbs.—2¼ run, old gold, 100% wool, cones
3,000 lbs.—2¼ run, tan, 100% wool, cones

SAM SASKEN CH 4-8733
1441 Broadway, New York 18, N. Y.

HELP WANTED

KNITTER-MECHANIC WANTED

Capable of creating new line on PR19 machines. Very attractive salary. Steady position. Manhattan plant.

BOX 530E

Bright Young Man Wanted by Leading Yarn Spinner

We offer an exceptional opportunity for growth to an aggressive young man with some industry background. Duties will consist of customer liaison and research and development. New York office.

BOX 520A

WANTED

Young man, alert, intelligent, experienced in handling yarns and records in knitting department. Excellent opportunity for conscientious person. All replies confidential.

BOX 520G

WANTED

Experienced mechanic on Supreme Wheel Machine. Modern plant. Steady work. Eastern Pennsylvania.

BOX 470

MECHANIC OR KNITTER-MECHANIC WANTED

Top men only apply. Must be thoroughly experienced on Jacquard LH and TJ circulars. Permanent position with established firm located in North Jersey metropolitan area. (20 minutes from tunnel or bridge.) Our employees know of this ad. All replies strictly confidential.

DEXTER KNITTING MILLS
Garfield, New Jersey GRegory 3-0133

WANTED
RESEARCH & DEVELOPMENT

Nationally prominent New England knitted fabric manufacturer has outstanding career opportunity open. Applicant must have broad experience in latch needle circular knitting as well as background knowledge of dyeing and finishing synthetic and natural fibres as well as blends.

If you are young and aggressive, with initiative and imagination you will be given the responsibility to create new products and the authority to get things done, reporting directly to top management.

Reply in the strictest confidence to:

BOX 520M

KNITTER-MECHANIC WANTED

with complete knowledge of Philip-Circular and Universal flats. Must be willing to relocate in North Carolina.

BOX 530D

ASSISTANT PRODUCTION MANAGER KNITTING MILL

Excellent growth opportunity for a good production-sales coordinator and planner.

Call OXford 7-4108 for interview

WINSTON THREAD MILLS

has a good deal for the right man to do a volume business in the knitting trade because:

1. We manufacture thread in our own plant, enabling us to have quality control at all times and give exceptionally fast service in all new shades.

2. We stock hundreds of colors, threads and notions such as 70/2, 40/3, Kismet boxes, nylon threads, pin tickets, and notions for immediate delivery.

Priced to meet or beat our competition. Men with side lines acceptable.

Phone or Write to:

Winston Thread Mills, Co., Inc.
687 Broadway, B'klyn 6, N. Y.
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MECHANIC WANTED

on Supreme ROF and automatic machines.
Good opportunity. New York City area.

BOX 320E

CLOSEOUTS

CLOSE-OUTS WANTED

CASH PAID for surplus stocks of Sweaters and Bathing Suits.

BERNETTE TEXTILE COMPANY
101 W. 31 St., New York City BRyant 9-5526-7

WANTED FOR CASH | **MEN'S & BOYS' SWEATERS AND POLO SHIRTS**

LOUIS SOMERFIELD

1140 B'way, New York 1, N. Y. MUrray Hill 3-7856

OPEN TO BUY CLOSEOUTS

All types of knitwear and bathing suits, etc. Ladies', men's and boys'. Only first quality. No irregulars.

BOX 537

KNIT FABRICS CLOSE-OUTS WANTED

Top prices for solids, stripes and fancies.

S. LEVINE AND SONS

639 N. 2nd St., Allentown, Pa., HEmlock 5-3578

NEED CASH FAST?

YARN CLOSEOUTS WANTED

Ban-Lon and Orlon Acrylic Small or Large Lots

RIDGEWOOD YARN

EV. 2-8002

REPRESENTATIVES WANTED, LINES WANTED

WELL KNOWN WORSTED YARN SPINNER

is looking for good and experienced representation in the outlying areas of metropolitan New York, including all of Brooklyn. Replies will be held in strictest confidence.

BOX 535

WANTED: SALES REPRESENTATIVE

for mill making all types of popular priced ladies' sweaters. Only highly rated representatives will be considered.

BOX 533

WANTED

Mock and full-fashioned Ban-Lon shirt line. New York showroom selling chains, dep't., discount and retail stores.

BOX 530A

WANTED

NATIONAL SALES REPRESENTATION

Large, long established sweater manufacturer with multi-plant operations currently selling chain-department stores and mail order wishes to expand its outlets to cover leading department stores and better retail chains.

Our line consists of women's coordinates in all gauges and all fibers.

Only apply if you have a large retail following and sales staff. Capable of generating one million dollars volume.

BOX 531

CONTRACT WORK, CONTRACTORS WANTED

CONTRACTOR SEEKS ADDITIONAL WORK

Novelties and classics — Ban-Lon or Orlon interlock shirts and sweaters. Also jersey and striped goods. Quality workmanship.

BOX 490L

QUALITY FULL FASHIONED CONTRACTOR

seeks additional work on fur blend, cashmere or woolen novelties. Intarsia and fancy work our specialty.

BOX 500W

CONTRACTOR SEEKS WORK

on better grade bulkies. 2½ gauge and 4 gauge equipment, also Jacquard.

BOX 500X

FULL-FASHIONED PRODUCTION AVAILABLE

Mill equipped with 21 gauge, up to date machines including lace, intarsia and stripping. Specializing in novelties and all types of wools and synthetic fibers. Open for additional production on steady, continuous basis.

BOX 539

ESTABLISHED SALES ORGANIZATION

handling men's and ladies' bulky sweaters seeks additional mills capable of adequate production for country's largest consumer.

BOX 538

SERVICES, SUPPLIES FOR SALE

SAVE MONEY ON POLYETHYLENE BAGS

9½ x 13—G. 001 @ $5.15 per M—G. 00075 @ $4.50 per M
11 x 14—G. 001 @ $6.35 per M—G. 00075 @ $5.25 per M

LUCKY POLYETHYLENE MFG. CO

454 Berry St., Brooklyn 11, N. Y. EVergreen 8-5403

NEW FORMULA

CLEANING FLUID FOR KNIT GOODS

Cleans Wool, Cotton, Rayon and Nylon
Special fluid for Orlon and Ban-Lon
Special Price for One Gallon Trial Order

Office: MASTER STAIN REMOVER

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KNITTER MECHANIC AVAILABLE

Experienced on Circular Links, TA's, TJ's, TJI's, fine cut Interlocks, Stoll and Universal flats.

BOX 530

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12,000 sq. ft. loft. Immediate possession. Live steam. High power lines. All clear space. Office space, Private elevator. Night watchman. Ideal for knitting mill operation.

Call: Venice Knitting Mills, Inc.
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RATES: one insertion—35 cents per word. Words set completely in capitals — 40 cents per word. Box numbers count as two words. Minimum cost of advertisement—$5.50. Minimum cost of Positions Wanted advertisements — $5.00. Trade Wants for Monday's paper must be in by preceding Wednesday. 2 P.M. Please enclose payment with your order.

WANTED: FLAT LINKS AND LINKS DOUBLE AND SINGLE JACK MACHINES. ALSO V MACHINES. BOX 530B.

Designer wanted to submit sketches on a free lance basis to Canadian knit good mfr. Ladies novelty sweaters. BOX 530F.

Mill representative seeking line of well made, popular priced bulkies. Can assure good volume. BOX 530G.

Looping Wanted. 7 Point Sotco and P7 and 15 point. Collars, plackets, Sanders Looping, 270 Irving Ave., Brooklyn, N. Y. HYacinth 7-7924.

Wanted: Knitter mechanic on flat machines. Universal-Tricoma. Night shift. Good pay, steady work. BOX 520E.

Wanted: 5 gauge Dubied or Supreme beds, all sizes. Millard Knitting Mills, 39 Cornelison Ave., Jersey City 4, New Jersey.

YOU'LL GET BEST RESULTS AND FAST ACTION

WHEN YOU —WANT TO BUY, SELL OR EXCHANGE

Yarns, Knitting Machinery
Mill Equipment, Supplies

—NEED CONTRACTORS?

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KNITTED OUTERWEAR TIMES
386 Park Ave. South, New York 16, N. Y.

Please enter our subscription to the Knitted Outerwear Times for one year. Check is enclosed. Domestic — $10.00 per year; Canada-Foreign — $15.00 per year.

Name.....

Address.....

.....

KNITTED OUTERWEAR TIMES
386 Park Avenue South, New York 16, N. Y.
Gentlemen:
Insert the ad written below in .....issues.
(Check one)

☐ **TRADE WANTS**
Rates per insertion: 35c per word; 40c if set in capitals. Box number counts as 2 words. Minimum cost per adv. — $5.50.
Positions wanted — $5.00.

DISPLAY AD
☐ 2" — $11.00
☐ 4" — $22.00
☐ 10" — $55.00

Please Enclose Payment With Order.
ADVERTISEMENT

☐ Check here if you want a confidential box number (replies sent to you as we receive them).

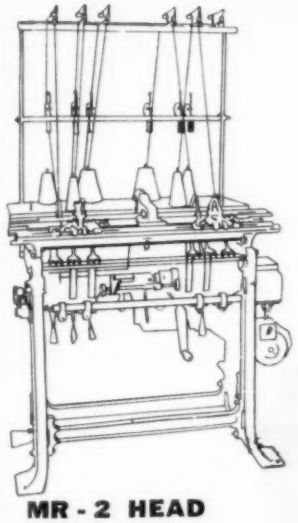
Name.....

Address.....

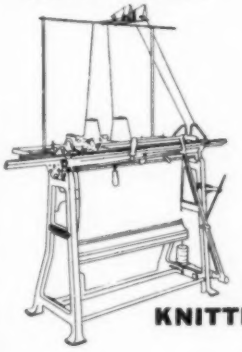
.....

(Use separate sheet if necessary. Attach this order blank.)

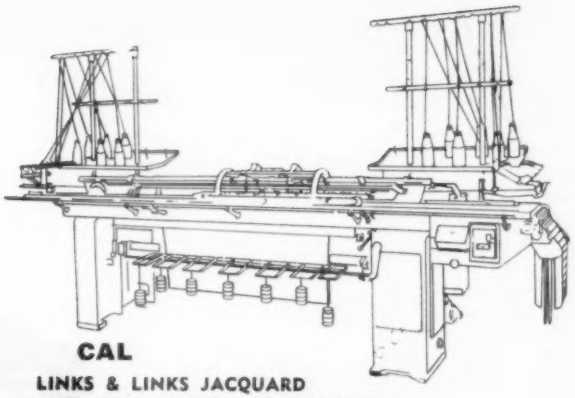
DUBIED



MR - 2 HEAD
MRHF - HEAD
BORDER MACHINE



HAND KNITTING MACHINES



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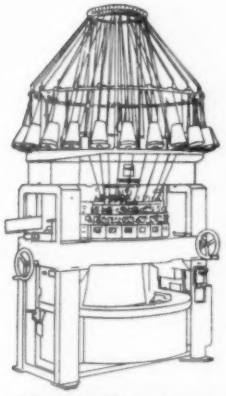
LINKS & LINKS JACQUARD
WITH TRUE CABLE ATTACHMENT



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JACQUARD YARD GOODS
MACHINE

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still ahead in the development of Knitting Machines, presents a view of the latest types. Reliability, high speed, efficiency are among the main features of all DUBIED types. Unequalled for the production of fancy trimmings and borders with or without doubling.

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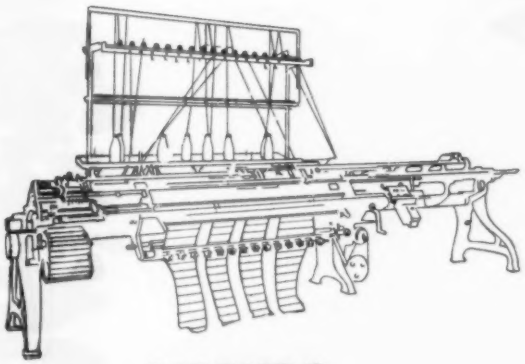
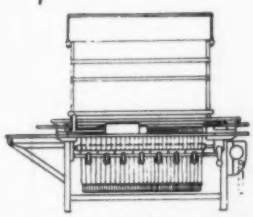
Long Island City 1, N. Y.
Telephone: RAvenswood 9-6361

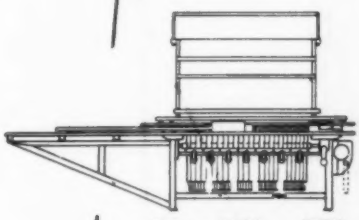


BAN-BARB/2
JACQUARD FLAT KNITTING MACHINE

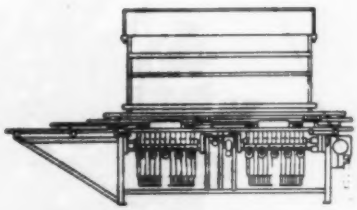
HIGH- AND LOW-BUTT NEEDLE FLAT KNITTING MACHINES:



DC — DSC — DRC



DL — DSL — DRL



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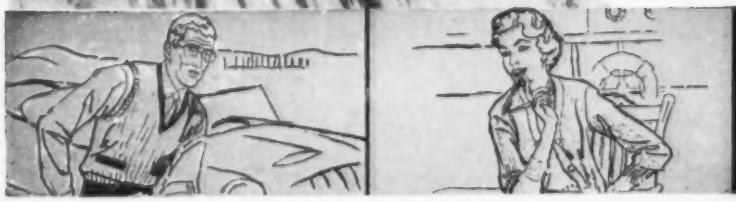

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When you buy from Woonsocket you are buying the best! Whether it be cashmere, camels hair, angora, fu blends, mohair, lambs wool or other specialty yarn, Woonsocket begins with the world's finest fibers. Woonsocket pro esses them in its own mills, under highly scientific control until the yarn is delivered promptly to your factory. Thu you are assured of an adaptable resource, able to meet the constantly changing demands of men's and women's fashion

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